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FACTS FOR PROSPECTIVE FARMERS.

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WRITTEN PRIMARILY FOR THE PERSON WITH LITTLE OR NO FARMING KNOWLEDGE OR EXPERIENCE WHO EXPECTS FARMING TO PROVIDE THE MAJOR PART OF HIS AND HIS FAMILY'S INCOME, THIS PUBLICATION BRIEFLY EXPLORES NUMEROUS ASPECTS OF OPERATING A FAMILY-MANAGED COMMERCIAL FARM. IN DESCRIBING WHAT FARMING IS LIKE TODAY, THE FOLLOWING POINTS ARE COVERED--IMPORTANT FARMING TRENDS, AVAILABILITY OF FARMS, RESOURCES NEEDED, LEVELS OF INCOME, AND HOW BEGINNERS GET STARTED. MAJOR TYPES OF FARMS PRESENTED INCLUDE DAIRY, FEED GRAINS AND LIVESTOCK, COTTON, WHEAT, RANGE LIVESTOCK, POULTRY, FRUITS AND VEGETABLES, SPECIALITY CROPS, AND GENERAL FARMING. THE QUESTION OF RENTING OR BUYING LAND AND METHODS OF FINANCING ARE OUTLINED, AS WELL AS SUGGESTIONS ON HOW TO GET STARTED. THIS BULLETIN IS ALSO AVAILABLE FOR $0.15 FROM THE SUPERINTENDENT OF DOCUMENTS, U.S. GOVERNMENT PRINTING OFFICE, WASHINGTON, D.C. 20402. (SF)

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FOR PROSPECTIVE FARMERS

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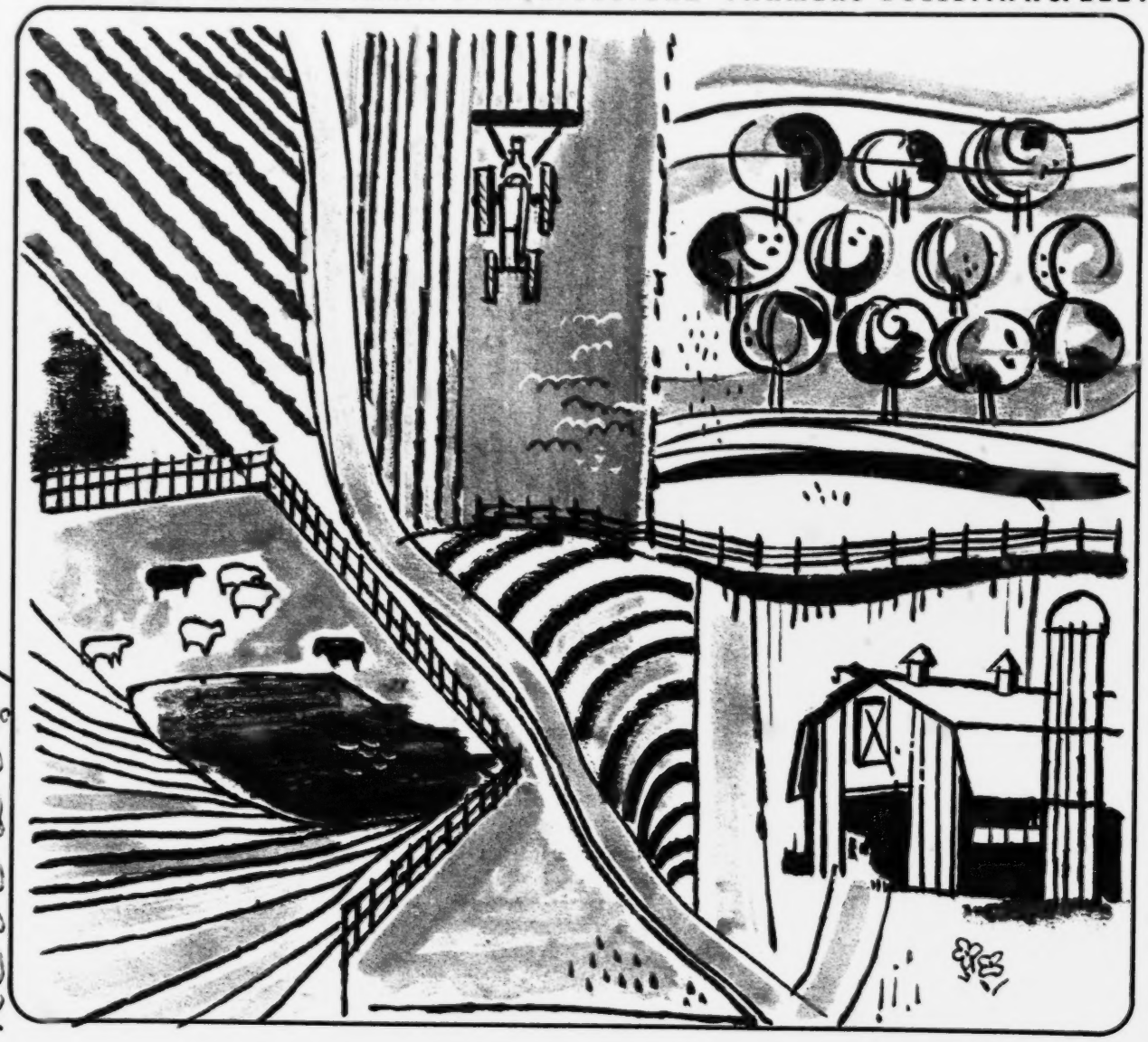

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Facts for Prospective Farmers

Every year many people in the United States seek to go into farming—either full or part time.

These prospective farmers have a wide variety of backgrounds. Some are just starting on a career; others have been working in nonfarm occupations. Some have grown up on a farm or have worked on one; others have had no farming experience.

Most prospective full-time farmers expect a farm to provide an income on which they can live comfortably, raise and educate a family, and perhaps build up an estate.

Of the prospective part-time farmers, some hope eventually to farm full time. They plan to continue their nonfarm work until they accumulate enough capital for a full-time farm business, gaining valuable farming experience in the meantime on their part-time farm.

Other prospective part-time farmers expect a farm only to supplement their wages, pensions, or other nonfarm income and provide a home.

This publication is primarily for the person with little or no farming knowledge or experience who expects farming to provide the major part of his and his family's income. It may be useful to others, however, including young farm families who have just begun to farm on their own, farm families who lack adequate resources for their present operations, and farmers who are considering a move to another region with which they are not familiar.

Although the information included here deals chiefly with the family-managed commercial farm that is large enough for efficient operation, it is recognized that many may want to begin farming on a smaller scale. Lack of experience, personal capabilities, or capital limitations may dictate a smaller operation. Such smaller operations can be satisfying, too, but will usually yield less income.

Much of the information is applicable also to part-time farming. A more detailed discussion of this kind of operation may be found in Part-Time Farming, U.S. Department of Agriculture Farmers' Bulletin No. 2178.

Buying, or simply renting, a full-time commercial farm and acquiring the facilities and livestock necessary for efficient operation require a big capital investment.

Making this investment wisely requires technical knowledge, managerial skill, and careful consideration of many important matters. Among these are kind and size of farm needed for the planned type of farming, location of farm in respect to market facilities, amount of land and capital required to provide an adequate income, and kind of equipment needed for efficient operation.

This publication is intended to serve as a general guide only. It is not possible in a single report to include all the important specific information for all types of farming in all parts of a country as large and varied as the United States. Sources of this more specific information are listed throughout the publication. Costly mistakes and disappointments may be avoided by taking the time to study carefully the available published information, by subsequent personal inspection of farming areas of interest, and by discussions with local people in such areas.

What Farming is Like Today

The commercial family farm today is a business venture comparable with many substantial business establishments in the city—in size of operation, financial risks involved, and requirements of capital, technical skill, and management ability.

Most of the production and living items the family needs are bought from others. And getting the land to farm on is one of the biggest problems of the beginning farmer.

Important Farming Trends

Farming in the United States has undergone many marked changes in recent years and is still changing rapidly. However, the family farm—one on which the operator and his family do the managing, take the financial risks, and do most of the work—is still the dominant unit of agriculture. In 1964, family-size farms made up 96 percent of all farms and accounted for 73 percent of all farm production.

Farms are getting larger. In 1965, the average size of farm was 341 acres. In 1940, it was 174 acres.

The number of farms is decreasing. In 1965 there were about 3,383,000 farms. The number has decreased steadily since the peak number of nearly 6,500,000 in 1920. Small farms have decreased most.

Capital requirements per farm are growing. The average total investment in land, buildings, livestock, machinery, and working capital was $59,500 in 1965, compared with $17,400 in 1950 and $6,200 in 1940.

Efficient farmers are becoming more specialized, and they depend ever more heavily on purchased "inputs"—feed, seed, fertilizer, equipment, and so on—and on cash markets for their products. Thus their net income has become increasingly vulnerable to changes in prices of both inputs and farm products.

Both technology and economics are responsible for the increases in farm size and capital investment. Technology makes it possible for the farmer to enlarge his operation. Economics makes it necessary.

Farm technology—the application of science findings to farming—is enabling the farmer to handle more crops and livestock and to produce more per acre or per livestock unit. New and improved labor-saving machinery, better seed, greater use of commercial fertilizer, better land use and treatment, insect and disease control, selective breeding, more efficient feeding and management practices—all are a part of this technology.

It takes larger farms to use modern machinery efficiently. It takes a greater output to pay for higher overhead and operating costs and to maintain or improve net income in the face of lower profits per unit of output.

Lower unit profits result from greater use of purchased production items, rising costs of these items, and sluggish prices for products the farmer sells.

These changes in farming have changed the emphasis on qualifications the farmer should have. Successful use of modern methods calls for a high degree of technical knowledge and skill. Successful handling of large investments in the face of high and rising costs, uncertain product prices, and bad weather and other risks requires expert business and financial management. Also farmers need to know about Government farm programs, including allotments and marketing quotas for specified farm commodities.

Life on the farm has changed, too. Modern power and equipment have eliminated much of the drudgery and strenuous work formerly needed to grow and harvest crops and care for livestock. Electricity has made it possible for farm homes to have the same conveniences and labor-saving equipment as urban homes.

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The family farm is still the dominant unit of agriculture. Today it is a business venture comparable with many substantial business establishments in the city.

The family of the beginning farmer, however, may have to forgo conveniences in order to put more capital into the farm business.

Availability of Farms

It cannot be emphasized too strongly that "free Government land" for farming is virtually a thing of the past. Practically all available land suitable for farming is privately owned.

Government land

Although the Federal homestead laws are still on the books, very few tracts of land suitable for farming become available any more. Those that do become available are "in the rough." Before one can make a living from them he must put in a lot of hard work and spend much time and money.

Some land in Alaska may be homesteaded, some leased, and some bought. But before settling there, the prospective farmer should get information from reliable sources about climate, farming conditions, and markets in the area in which he is interested. Land may have to be cleared. Chances of success are limited by lack of markets and transportation facilities. For sources of information on Alaska, see page 21.

Privately owned farms

Only about 170,000 farms are vacated each year by operators who die, retire, or leave the farm for other reasons. Probably less than one-fifth of these farms are acquired

TABLE 1.—RESOURCES NEEDED: Land, labor, and capital used in 13 types of commercial farming, averages per farm per year, 1962–1964

TYPE AND LOCATION OF FARM	LAND		TOTAL LABOR USED	CAPITAL				
	TOTAL	CROPLAND HARVESTED		TOTAL	LAND AND BUILDINGS	MACHINERY AND EQUIPMENT	LIVESTOCK	CROPS
	Acres	Acres	Hours	Dollars	Dollars	Dollars	Dollars	Dollars
DAIRY—CENTRAL NORTHEAST	240	90	4,600	43,800	23,600	7,900	9,300	3,000
DAIRY, GRADE A—EASTERN WISCONSIN	175	120	4,650	68,760	39,370	12,310	11,780	5,300
POULTRY, EGGS—NEW JERSEY	10	0	5,030	44,740	35,110	2,260	7,370	0
POULTRY, BROILERS—GEORGIA	65	5	1,570	16,450	11,450	4,100	730	170
HOG-BEEF FATTENING—CORN BELT	265	190	3,910	120,170	82,770	10,090	16,140	11,170
CASH-GRAIN—CORN BELT	270	220	3,180	129,410	117,080	8,140	2,400	1,790
COTTON—SOUTHERN PIEDMONT	235	65	4,930	30,710	27,000	2,150	1,050	510
COTTON—IRRIGATED HIGH PLAINS, TEXAS	440	295	5,690	140,610	122,430	16,930	820	430
WINTER WHEAT—SOUTHERN PLAINS	810	335	2,890	109,150	87,780	11,070	7,760	2,540
SPRING WHEAT-SMALL GRAIN-LIVESTOCK—NORTHERN PLAINS	740	385	2,580	57,310	40,390	10,990	4,190	1,740
CATTLE RANCH—NORTHERN PLAINS	4,430	255	4,010	87,710	52,480	7,750	24,240	3,240
SHEEP RANCH—SOUTHWEST	13,520	10	5,390	217,220	189,700	4,900	21,840	780
WHEAT-PEA—PACIFIC NORTHWEST	600	385	3,540	201,900	174,800	23,270	2,460	1,370

by new farmers, many of them young men who take over the home farm from their parents.

Most of the remaining farms are bought or rented by established farmers. Half of the farm tracts sold each year are bought by established farmers to enlarge their farms.

Some land goes out of farming each year—into urban, industrial, highway, or other nonfarm use. A smaller acreage of land is brought into cultivation each year by irrigation and drainage. The net result: total land in farms is decreasing.

In 1965 there were 1,155 million acres of land in farms. It is estimated that this figure will shrink by about 15 million acres in the next 10 to 15 years.

Resources Needed

How much land, labor, and capital does it take to farm?

The requirements for these resources vary widely among different types of farms. Not only do the total inputs of each resource vary with type, but there is a great difference in the relative importance of each.

For example, compare two extremely different farms—a typical New Jersey farm producing market eggs and a sheep ranch in the Southwest. The poultry farm has only 10 acres of land, the sheep ranch 13,520. The poultry farm requires 5,030 hours of labor per year to care for 4,625 hens; the sheep ranch requires 5,390 hours per year to care for 1,350 head of sheep. Total capital invested is $44,740 in the poultry farm, $217,220 in the sheep ranch.

Table 1 shows land, labor, and capital requirements for 13 representative, operating commercial farms in different parts of the country. Each figure given is a yearly average for the 3 years 1962–64. Similar information for 29 other types of commercial farms is published annually by the Department.

As the table shows, fewer acres of cropland are used in livestock systems of farming, such as dairying, than in cash-grain farming. More land is needed in areas of low production per acre—such as the wheat and ranching areas—than in high production areas, such as the Corn Belt. Capital investment in land is higher in the Corn Belt, however, because of the higher cost per acre.

The resources used on these typical farms indicate what experienced, working farmers are using today. They do not, however, necessarily represent the most efficient combinations of land, labor, and capital.

Beginners who have neither the capital nor the managerial ability to start with a highly specialized farm—such as those in table 1—frequently start with a more general type of farming.

Such a general farm might, for example, combine a small dairy enterprise, hogs, or poultry, and perhaps a cash crop. This kind of farming may not use resources most efficiently, but it takes less capital and makes it possible for the farmer to make full use of his time; his earnings per hour, of course, are less than they would be on a more specialized farm.

Levels of Income

How well does farming pay?

Type of farming, size of farm, quality of resources used, cost of production items, prices of farm products—these are some of the elements that determine net income from the farm. Another big item is the farmer himself—his technical knowledge and skill, his business efficiency, and his management of the resources at his disposal.

Table 2 indicates the levels of income that experienced, full-time, commercial farmers are getting. It shows average annual incomes obtained during the three years 1962–64 on the same typical commercial farms as listed in Table 1. Similiar information for 29 other types of farming is published annually by the Department. Incomes, of course, fluctuate from year to year.

TABLE 2.—RETURNS FROM FARMING: Costs and returns from 13 types of commercial farming, averages per farm per year, 1962–1964

TYPE AND LOCATION OF FARM	TOTAL CAPITAL	GROSS FARM INCOME	OPERATING EXPENSES	NET FARM INCOME	INTEREST ON CAPITAL [1]	RETURN TO OPERATOR AND FAMILY LABOR	
						NET	PER HOUR
DAIRY—CENTRAL NORTHEAST	$43,800	$14,210	$10,280	$3,930	$2,525	$1,405	$0.37
DAIRY, GRADE A—EASTERN WISCONSIN	68,760	16,270	9,880	6,390	3,780	2,610	.63
POULTRY, EGGS—NEW JERSEY	44,740	27,720	25,385	2,335	2,570	−235	−.06
POULTRY, BROILERS—GEORGIA	16,450	2,625	1,840	785	990	−205	−.14
HOG-BEEF FATTENING—CORN BELT	120,170	34,965	25,375	9,590	6,990	2,600	.81
CASH-GRAIN—CORN BELT	129,410	20,985	9,770	11,215	7,305	3,910	1.36
COTTON—SOUTHERN PIEDMONT	30,710	6,940	4,040	2,900	1,955	945	.39
COTTON—IRRIGATED HIGH PLAINS, TEXAS	140,610	32,640	16,750	15,890	8,120	7,770	3.20
WINTER WHEAT—SOUTHERN PLAINS	109,150	16,745	6,605	10,140	6,095	4,045	1.58
SPRING WHEAT-SMALL GRAIN-LIVESTOCK—NORTHERN PLAINS	57,310	15,390	5,910	9,480	3,280	6,200	2.78
CATTLE RANCH—NORTHERN PLAINS	87,710	14,230	7,340	6,890	4,825	2,065	.63
SHEEP RANCH—SOUTHWEST	217,220	19,010	13,330	5,680	11,950	−6,270	−2.35
WHEAT-PEA—PACIFIC NORTHWEST	201,900	30,700	13,350	17,350	11,390	5,960	2.02

[1] At current interest rates.

The cost figures for operating expenses in the table include depreciation on buildings, machinery, and equipment. Replacements for these facilities can be deferred, and the income earmarked for depreciation can be used for other purposes. This can be done only temporarily, however; the depreciation allowance must eventually be spent on replacements.

The interest charge on total capital represents what the same amount would earn in other investments. If assets are debt free, the income allotted for interest can be used for purposes other than debt repayment.

Many prospective farmers have in mind a certain level of income they would want farming to provide. They want to know how much land, labor, and capital would be needed to attain that income.

The Department of Agriculture has estimated the minimum "complements of resources" needed to enable farmers to realize $2,500, $3,500, $4,500, and $5,500 a year for their labor and management on major types of farms in 30 selected farming areas of the United States. These estimates are available on request. The four income levels to which the estimates are keyed are about the median annual earnings of skilled or semiskilled workers in nonfarm employment in different regions of the country.

How Beginners Get Started

Young men reared on a farm often start on the home farm or on a farm nearby. Often they get help from their families at first—in such forms as financial assistance, favorable rental arrangements, or free use of farm machinery.

Some nonfarm beginners may also get financial assistance from relatives or others, or from earnings in off-farm work. Financial help from other than commercial sources can do much to get the beginning farmer off to a good start.

A beginning farmer with little or no experience may start by working for a while as a farmhand. In this job he can learn by doing and by observing. He is not required to make any managerial decisions or to put up any capital. Although he usually can support a family on his wages, he probably cannot accumulate much capital. However, the experience he gains will be an asset when he goes out to rent a farm or apply for a farm loan.

Beginners often rent rather than buy their first farm. Renting requires less capital and less risk for the operator. As a tenant, the operator makes day-to-day decisions on his own. Overall decisions, such as the kinds and amounts of crops and livestock to be produced, and the use and care of land and improvements on it, usually must have the approval of the landowner. Many important managerial decisions are made by tenant and landowner together. Sometimes livestock may be owned jointly.

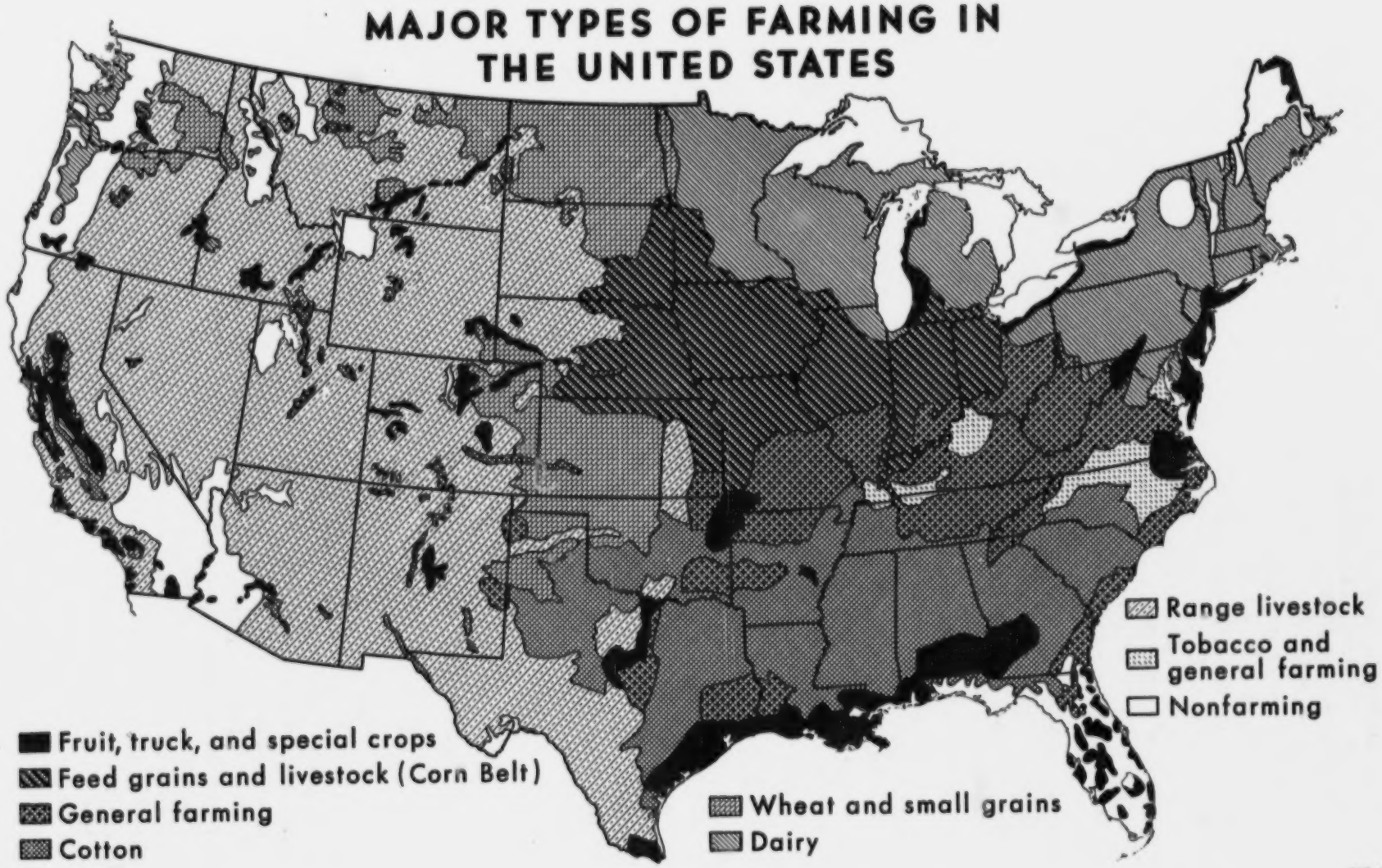
Other ways a beginner can keep the amount of capital required to a minimum without greatly reducing his income include: Buying used machines at farm sales or from dealers; hiring custom machines to pick corn, harvest small grains, and fill silos; exchanging work with neighbors for seasonal work requiring additional help.

Beginners may also buy some of the land they farm and rent the rest. In recent years, this part ownership arrangement has become common even among established farmers.

Under this arrangement the operator owns part of the land, usually with the necessary buildings on it, and rents additional land. Part ownership has developed as a way for the operator to meet today's need for larger farm operating units with a limited capital investment.

Some start farming part time on a small farm. They continue in nonfarm work as a primary source of income long enough to gain experience and accumulate capital for a full-time farming business.

MAJOR TYPES OF FARMING IN THE UNITED STATES



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Major Types of Farms

Farms are classified into types according to the product or products that provide the major part of the income. Cash grain farms are those on which corn, soybean, or wheat sales supply the greater share of the income. Similarly, there are dairy farms, cotton farms, fruit and vegetable farms, beef cattle farms, hog farms, hog-beef fattening farms, poultry farms, and so on.

Farms of most major types are located in rather well-defined areas of the country. That is, certain types of farms predominate in certain areas. This emphasis has come about because a certain type or types of farming make the most profitable use of available resources under the physical, biological, and economic conditions in an area.

Physical and biological conditions determine the kinds of crops that can be produced. They affect yields and costs of production. Economic conditions determine which crops or livestock can be produced most profitably and the forms in which they are sold from the farm.

Physical conditions change comparatively little over the years. The most important ones are kinds of soil, topography, and climate. Soils on the same farm may vary greatly. Some crops, such as corn and hay, can be grown under a wide variety of physical conditions. Others, such as cotton and tobacco, are strictly limited by climate or soil.

Some areas, such as the Corn Belt, have the physical conditions for growing many crops successfully. In some, such as the Great Plains wheat region, physical conditions are suitable for only a few crops.

Biological conditions that limit production include the prevalence of noxious weeds, insects, and diseases. Modern control methods have reduced the importance of these biological conditions, but control "know how" and costs remain an important consideration. Biological conditions are constantly changing.

Economic conditions also change constantly. Among those that help determine the type of farming that is stressed in an area are: Distance to market for some products; improvements in transportation facilities and in methods of food preservation; development of labor-saving machinery that can be used more efficiently in one area than in another; shifts in population; and changes in consumer demand.

Although resources in an area tend to be used to produce the most profitable crop, this does not necessarily mean that only this one crop is produced. Other crops usually are grown to make more efficient use of available labor, power, and machinery and to meet soil and water conservation requirements.

The major, broad agricultural regions in the United States are shown at left. In each region, there is a major crop or class of livestock produced. Each region can be further subdivided into type-of-farming areas, according to the crops grown in combination with the major crop or the kind of livestock through which the crop is marketed.

More than 500 type-of-farming areas can be identified within the major agricultural regions in this country. This, of course, does not mean that every farm in an area is cut on the same pattern. Because resources differ from farm to farm, production differs also. In every region, some farms stress production of whole milk or fresh vegetables because special markets for these products exist in all regions.

Dairy

Dairy farming is concentrated in the Northeast, the Lake States, and along the North Pacific Coast. Soils and topography in these areas are not as favorable to production of grain crops on a large scale as in the Corn Belt, for example. But the cool climate and ample, well-distributed rainfall are favorable to production

of hay and pasture crops. These crops, supplemented by grains shipped in from surplus-grain-producing areas, can be efficiently used by dairy cattle.

Most parts of the dairy regions are close to population centers. In these parts dairy farms are highly specialized, and milk is sold for fluid consumption.

In parts of the dairy regions farther from consuming centers, milk is sold for use in dairy products, such as butter, cheese, and ice cream. The dairy enterprise is usually less intensive than in the fluid milk areas. In the farm organization, dairy cattle are combined with other farming enterprises, such as poultry, livestock, and (where growing conditions are favorable) specialty crops such as potatoes and vegetables for canning.

Feed Grains and Livestock

Feed grains and livestock predominate in the Corn Belt—a broad region extending from central Ohio west to central Nebraska and eastern South Dakota.

Conditions in this region are well adapted to the production of grains. Land is mostly level to gently rolling. The principal soils are deep, fertile, and rich in organic matter and nitrogen. The growing season is warm and moist, and it is long enough for many crops.

Corn is the leading crop, soybeans second. Both are grown in combination with small grains (such as oats, wheat, or barley) and hay crops to make the most efficient use of labor and equipment and to protect the land from erosion and loss of fertility. Grain sorghum as a feed crop is gaining in the western part of the region.

Cash grain farming predominates in east central Illinois and central Iowa. In these areas level prairie land is adapted to large-scale machinery. Corn and soybeans plus a minimum of small grains and grasses make up the cropping system.

In the rest of the Corn Belt, beef cow and calf enterprises, beef feeding, and hog raising are combined in many ways to use efficiently the resources available. Beef cow and calf enterprises are important on farms where much land is best adapted to permanent pasture, as it is, for example, along the Mississippi and Missouri Rivers and along many smaller waterways. Beef cattle feeding and hogs are major enterprises where less forage is produced. In some areas large-scale beef-feeding enterprises predominate.

Cotton

Cotton is a major crop in all or large parts of nine southern States—called the Cotton Belt—and in irrigated areas of California, Arizona, and New Mexico.

These areas have the long, hot growing season and include the well-drained soils that cotton requires.

Until recently, cotton has been a heavy user of labor. Development of machinery to replace hand labor has led to increased cotton acreage in the areas best adapted to mechanical harvesting. Notable among these are the irrigated areas in the three western States, the lower Rio Grande Valley, and the Texas High Plains. Acreage has declined in most of the Cotton Belt east of the Mississippi River. Production has not declined as much as acreage because of increases in yield per acre.

The relative importance of cotton in the farm organization varies widely in different parts of the Cotton Belt. Feed grains and grasses for forage have replaced much cotton in the eastern part of this region. Livestock has become more important on many farms. And broiler production has become a major enterprise in some areas where labor is plentiful.

Wheat

Wheat is the major source of farm income in the southern and northern Great Plains and in the Columbia River Basin of the Northwest.

Although yields of wheat are lower in these areas than in some others,

wheat growing is profitable because the topography of many of the soils is well suited to large-scale mechanized operations. Also, there are few alternatives to wheat in these areas of scant rainfall.

Winter wheat is grown in southwestern Nebraska and in Kansas, Colorado, Oklahoma, and Texas. In the eastern part of this section—where rainfall is greatest—corn, barley, and oats are also grown. In the western part where rainfall is 20 inches or less a year, wheat is grown in combination with grain sorghums and summer fallow. On some farms, as much as one-half the cropland is in fallow. A practice that contributes substantially to farm income during favorable years is grazing of wheat during fall and early winter. Cattle and sheep are brought in on contract to graze.

Spring wheat is grown in the Northern Great Plains—Montana, North Dakota, and South Dakota—where winters are severe and the growing season short. In the eastern part of this area, wheat is grown in combination with barley, rye, and flax.

Potatoes and sugar beets as well as wheat are grown in the Red River Valley of Minnesota and North Dakota. In western North Dakota and in Montana—where much of the land is rough and suitable only to grazing—there are extensive wheat-livestock ranches.

Both spring and winter wheats are grown in the Columbia River Basin in Washington, Oregon, and Idaho. Winter wheat is preferred because of its greater yield; if the winter crop fails, fields are often reseeded to spring wheat.

In the western drier area, wheat is alternated with summer fallow. In the eastern part, dry, edible peas are alternated with wheat. Also, in the eastern part livestock is a definite part of the farm economy—usually small dairy, beef cattle, hog, or poultry enterprises. Barley, oats, and hay are grown to provide necessary feed.

Range Livestock

Cattle or sheep ranching is carried on in the 11 Western States. In most of this region, soils, elevation, topography, and climate are such that there are few alternatives to ranching. Rainfall is low and uncertain, making crop production impossible or hazardous except under irrigation.

Overall, about half the range area is Federal or State land but the proportion varies from State to State. This land is made available through permit or lease to nearby ranch operators, usually for a fixed annual fee per head of livestock.

Livestock ranches vary in size from a few thousand acres to many thousands if both owned and leased lands are included. Because of the low productivity of the land it takes many acres to graze each animal and many animals per ranch to yield an adequate income. Cattle and sheep are produced in different areas where conditions are best suited to each.

The system of grazing varies considerably. Usually grazing is year round in the southwest, where winters are mild, and seasonal in the northern areas. Wherever livestock are grazed in the winter, cottonseed cake is fed as a supplement. In northern areas, harvested native grasses are used for winter feed. Many young cattle and lambs are shipped from ranches to local irrigated areas or to the Corn Belt for fattening, or "finishing." Usually these feeder animals are shipped in the fall when pastures give out.

Poultry

Poultry farming has changed radically in recent years. It is no longer just a sideline business on nearly every farm. Instead, it is a major enterprise on farms that specialize in either broiler or egg production.

Expansion of broiler production and the increase in size of laying flocks have been stimulated by labor-saving equipment and practices, by improved feeding and management,

and by contract production arrangements. In contract production, the feed dealer, the supplier of chicks, or the final processor supplies much of the credit and assumes most of the price risk.

Today about two-thirds of the broilers marketed are produced in the South. Egg production is still widely distributed throughout the country.

Fruits and Vegetables

Fruits and vegetables are produced in many widely separated areas. Usually an entire area is given over to this kind of production. But in some places where there is a ready market, specialized fruit or vegetable farms are interspersed among farms of other types.

For many fruits and vegetables climate determines the production areas. For example, citrus fruits and winter vegetables can be grown commercially only in the most southern parts of the country. Deciduous fruits are best adapted to areas where early fall or late spring frosts are least likely to occur; they can be grown in some northern areas, however, if a nearby large body of water or especially good air drainage reduces the risk of damage from frost.

A ready market and good management are first requirements for the successful production of fruits or vegetables for fresh market. Such production is an intensive operation. Land values are high, and inputs per acre are heavy for seed, fertilizer, insect and disease control materials, and labor. Timing of vegetable planting to obtain the best price for products and operational planning for efficient production are highly important.

The major producing States for the most important fruits and vegetables are:

Citrus fruits . . . Florida, California, Arizona, Texas.

Apples . . . Washington, New York, Michigan, Virginia, and California.

Peaches . . . California, South Carolina, Georgia, New Jersey, and Pennsylvania.

Pears . . . California, Washington, Oregon, Michigan, and New York.

Grapes . . . California, New York, Michigan, Pennsylvania, and Washington.

Cranberries . . . Massachusetts, New Jersey, Wisconsin, and Washington.

Cherries . . . Michigan, New York, Oregon, California, and Washington.

Strawberries . . . California, Oregon, Michigan, Washington, Louisiana, and New Jersey.

Vegetables for fresh market . . . California, Florida, Arizona, Texas, and New York.

Vegetables for processing . . . California, Wisconsin, Oregon, Washington, and New Jersey.

Specialty Crops

The main specialty crops are potatoes, sugar beets, sugarcane, peanuts, rice, tobacco, and dry beans.

Generally these crops are grown commercially in small, definitely outlined areas where soil and climate are especially favorable. Sometimes they are the main crop the farmer grows, sometimes a supplementary cash crop. Some, such as sugarcane, can be grown only in limited areas in the United States.

Major producing States for the main specialty crops are:

Potatoes . . . Idaho, Maine, California, New York, Wisconsin, and Minnesota.

Sugar beets . . . California, Idaho, Colorado, Nebraska, Minnesota, and Washington.

Sugarcane . . . Louisiana and Florida.

Peanuts . . . Georgia, Texas, Alabama, North Carolina, Oklahoma, and Virginia.

Rice . . . Texas, Arkansas, Louisiana, California, and Mississippi.

Tobacco . . . North Carolina, Kentucky, South Carolina, Tennessee, Georgia, and Virginia.

Dry Beans . . . Michigan, California, Colorado, Idaho, Nebraska, and New York.

General Farming

Farms on which several crops or several classes of livestock, or both are produced are found in nearly all parts of the country. They are most numerous in the areas where the Corn Belt and the northeast dairy region merge and where the Corn and the Cotton Belts merge.

On most general farms the acreage of land suited to cultivation is limited and usually cannot be cropped intensively. Usually livestock is important as a means of using pasture and other forage.

Incomes from farms of this type usually are lower than from more specialized farms. Income may be more stable, however, because it is derived from several sources. Homegrown produce consumed in the home is often an important part of income on general farms.

Other Farm Enterprises

Other enterprises associated with the land and rural living include raising of fur animals, production of honey, production of goat's milk, and recreation farming.

The possibilities of recreation farming are becoming greater as urban people have more leisure time and are able to get out of the city for relaxation. A recreation farm may be a place to hunt or fish, to camp, or to just rest and enjoy the rural atmosphere.

This kind of farming is often suitable for acreages least adapted to production of crops or livestock. Development of an area or of unused land on a farm for recreational use as a source of income may be an efficient use of resources.

A location conveniently accessible to an urban center is an advantage for most types of recreation farming and a requirement for some.

Obtaining A Farm

Whether he wants to rent or buy, getting a suitable farm is a big problem for the beginner.

He must compete for available farms with established farmers as well as with other beginners. Many established farmers need more land to enlarge their operations. Others move during the year, getting a better or more suitable farm. Some simply move to a new locality for personal reasons.

Renting

The main advantage in renting over buying is that less capital is required and less financial risk is involved.

The main disadvantage is insecurity of tenure. Another is that the farming enterprise may be limited in size or kind because the landowner is reluctant to make needed additional investments in buildings and facilities.

These disadvantages can be lessened, sometimes eliminated, by a suitable lease—an agreement between landlord and tenant under which a farm is rented and operated. Written leases are advisable.

Types of leases.—Three types of leases in common use are: Cash lease; crop-share lease; and livestock-share lease. Another type sometimes used is the labor-share lease, also called the manager-tenant lease.

The tenant who has a *cash lease* agrees to pay a specific amount of money annually for use of the farm. He assumes all the risk of crop fail-

ure and price drops and receives all the benefits of good crops and high prices for them. He usually has more independence in the operation of the farm than he has with other types of leases. This is the least common type of lease, especially for beginning farmers.

The tenant with a *crop-share lease* gives the landowner as rent a certain share of crops produced. Often the costs of such items as fertilizer and harvesting are also shared by the owner. Usually the lease specifies the minimum acreage of crops to be shared. The size of the share paid to the landowner varies with the productivity of the land, the hazards in production of the crop, and the contribution to production made by each party.

With this type of lease the tenant needs less capital and operating reserve and assumes less risk than he does with a cash lease. He also has less freedom in selection of crops and production practices.

A variation of the crop-share lease is the crop-share-cash lease, which includes a specified cash rental for pasture and meadowland.

The *livestock-share lease* is similar to the crop-share lease except that the landowner owns a share of the livestock, and a share of the income from the livestock is paid as rent. Rent also includes a share of all crops not marketed through the livestock. The tenant assumes less risk than he does under the crop-share lease, and he usually has less freedom in making decisions.

Under this type of lease, the amount of rent is based more nearly on the net income from the farm than under other types. It permits the landowner to maintain a more active interest in the farm and enables the tenant to gain experience in livestock management with less risk.

Under the *labor-share* or *manager-tenant lease* the landowner pays the tenant a fixed amount for his labor and management, plus a share of the net income above a certain amount. The owner turns over to the tenant the operation of a farm fully equipped with machinery and stocked with livestock but maintains an active interest in the operation of the farm.

Beginners with no experience can seldom get this type of lease; farmowners usually want an experienced manager. Frequently they require some surety that the tenant's obligations will be fulfilled.

Contents of the lease.—Provisions in the lease should establish specifically and in detail the rights, duties, and responsibilities of both tenant and landowner. These provisions can do much to establish and maintain good working relations between the two.

Among general provisions that are included in most leases is one that establishes the duration of the lease. A short-term lease that is automatically renewed from year to year unless notice of termination is made by either party provides for some tenure security and stability of operation.

Usually under other lease provisions the tenant agrees to farm the land in "a good and proper" or a "husbandlike" manner and to keep buildings and fences in good repair. Usually the landowner agrees to furnish repair materials.

Most leases provide that the landowner may take possession of the farm if the tenant fails to pay the rent stipulated or to comply with other lease provisions.

Special lease provisions should cover the division of such costs as those for seed, fertilizer, and harvesting. The lease should provide for reimbursing the tenant for unexhausted improvements that remain when he leaves the farm; these improvements include sowing of legumes and application of lime and fertilizer from which the benefits have not been received.

A cash or crop-share lease usually specifies the maximum amount of land to be used for hay or meadow.

If the landowner has an interest in the livestock, the lease should

also state the division of such costs as those for purchased feed, veterinary fees and medicine, and registration of animals. It should also specify how livestock ownership will be dealt with on termination of the lease.

A careful determination of lease provisions and putting them in writing will result in a lease more equitable to both tenant and landowner, and will avert later misunderstanding and friction between the two parties.

Tenancy laws differ in particulars from State to State. Both parties to the lease should familiarize themselves with the applicable State law.

For other publications of the Department of Agriculture containing information on leases and renting, see page 21.

Buying

The advantages of ownership are security of tenure and freedom to make management decisions. Earnings from the operator's equity capital may be added to labor and management earnings for living expenses, reinvestment in the business, or other uses. Also, the value of the land may rise over time.

On the other hand, ownership may involve substantial indebtedness. Risks of financial loss are greater than in renting.

Ownership, of course, brings with it financial responsibility that is both greater and longer lasting than the financial responsibility renting entails. Few persons buy more than one farm in a lifetime; moves are time consuming and expensive. The section on Financing the Farm below covers many points to be considered by the prospective farmer who is thinking of buying.

Some part-time farmers working at nonfarm jobs use their off-farm income to move gradually into full-time farming. They use their initial savings to make a downpayment on a small farm and to buy enough livestock and equipment to permit limited farming operations for the first few years.

The off-farm income makes them better credit risks for lenders than if they were wholly dependent on farm earnings. They can continue to borrow to build up their farm business to a point where it will support their family and pay off previous loans.

Such a gradual shift into full-time farming can usually be made with less sacrifice in family living standards and better chance of eventual success than an abrupt change to full-time farming.

Financing the Farm

Before he decides definitely whether he will buy or rent and the enterprises he will go into, the beginner should work out a capital budget. The purpose of planning such a budget is to show how the available capital can best be used. He should not overlook the fact that some of his capital will be needed for day-to-day operating and family-living expenses until income is produced.

Part of the original capital usually will be borrowed money. Farmers, even beginners, need and use fairly large amounts of credit. This credit, wisely used and managed, can make it possible for the farmer to obtain the basic resources needed for an efficient and profitable operation.

A key problem the beginner may need to solve in making out his capital budget is how much he can borrow and repay from farm earnings. The amount that can be borrowed depends on the amount of money the beginner can put into the business, his character and credit rating, and his farming experience.

Most commercial lenders have guides and standards that set upper limits on the amount they will lend. Usually, for example, to get credit on a mortgage for buying a farm the borrower is expected to make a

downpayment of 40 to 50 percent of the purchase price. Lenders usually will make loans on livestock and on new machinery for up to 80 percent of the purchase price.

A beginner may find in making up a capital budget that if he makes a downpayment on a farm he does not have enough left to buy livestock and machinery. If so, it would probably be better for him to start as a tenant with a full line of modern machinery and adequate numbers of livestock than to stretch the funds to acquire an uneconomical combination of real estate, equipment, and livestock.

Loans

Getting the needed credit through the right kinds of loans from the best available sources is an important part of sound financial farm management.

Kinds

Farm loans may be generally classified as long term, intermediate term, and short term. A special kind of loan is the installment purchase contract.

Long-term loans secured by a mortgage on the real estate are used to buy land or make major improvements to farmland and buildings or to finance construction of new buildings. They may be for as long as 40 years. Usually they are paid off in regular annual or semiannual payments.

Intermediate-term loans are used to buy equipment and breeding stock, for making land improvements, for new buildings, and for remodeling existing buildings. They are paid back in from 3 to 7 years. Generally they are secured by a chattel mortgage on livestock and machinery.

Short-term loans are made for all types of seasonal operating and family living expenses including purchase of materials such as seed, fertilizer, and tractor fuel. They usually run for a year or less. Security such as a chattel mortgage on a crop may be required by the lender.

An installment land purchase contract is a method of buying a farm that is similar in some ways to buying a car on installments. The buyer makes a small downpayment on the farm and uses the farm as if he owned it outright, but the legal title remains with the seller until all of the purchase price has been paid or an agreed-on part of it.

The downpayment required may be only 10 to 20 percent of the total selling price instead of the 40 to 50 percent usually required for a mortgage. The balance of indebtedness is spread out over whatever length of time the seller and buyer agree to. Interest is charged on the unpaid balance as with a mortgage.

Anyone entering into an installment land contract should get good legal advice first. Special provisions can be written into the contract to protect both buyer's and seller's interests.

The buyer assumes more risk when he enters into a land contract than he does when he obtains a mortgage. He can lose possession of the farm if he fails to make payments on schedule; in some States he may also lose all the money he has put in. If the term of the contract is too short, the payments can be excessive in relation to the earning capacity of the farm.

It is often safer to use a land contract for several years to build up the owner's equity to the point where a mortgage loan can be obtained than to use it as the only means of financing purchase of a farm.

Sources

Table 3 shows the main sources of the three main kinds of loans. In seeking a loan it usually pays to "shop around" in advance of actual need to see which source is best under the circumstances. Compare cost of credit, length of loan, loan fees, repayment privileges, and security required. Also, for long-term loans check the reputation of the lenders for "staying with" worthy borrowers in hard times.

TABLE 3.—Principal sources of 3 main kinds of farm loans

CREDIT SOURCE	KIND OF LOAN		
	LONG TERM	INTERMEDIATE TERM	SHORT TERM
COMMERCIAL BANKS	X	X	X
DEALERS AND MERCHANTS		X	X
FARM MORTGAGE COMPANIES	X		
FARMERS HOME ADMINISTRATION	X	X	X
FEDERAL LAND BANK ASSOCIATIONS	X	X	
INDIVIDUAL LENDERS	X	X	X
INSURANCE COMPANIES	X		
PRODUCTION CREDIT ASSOCIATIONS		X	X

In comparing costs of credit, look at total dollar amounts, not just interest rates. Lenders figure charges in different ways. For example, if you buy fertilizer or farm machinery on the time-purchase plan, you may find that you'll pay more in interest than you would if you borrowed the money to pay for the purchase outright.

To obtain loans or information about loans from commercial banks, dealers and merchants, farm mortgage companies, individuals, and insurance companies, apply directly to these sources or to their local representatives. Local banks and farm real estate dealers often serve as loan correspondents for life insurance or farm mortgage companies; they can tell you about loan requirements, terms, conditions, and interest rates and arrange for loans.

The Farmers Home Administration makes loans only to farmers unable to obtain adequate credit from other sources at reasonable rates and terms. Applicants who are veterans and have farm experience receive preference. FHA helps applicants determine their credit needs, work out debt repayment schedules, and solve other financial problems even though they may not be eligible for a loan.

Farmers Home Administration loans are made to farmers who carry on farming operations on a scale large enough to support their families and to farmers on small farms who obtain income from off-farm employment. Each farm-ownership loan is based on a plan that when followed will provide enough income from the farm and other sources to enable the family to have a reasonable standard of living and make payments on its debts when due.

The county supervisors of Farmers Home Administration help borrowers prepare the plan and provide on-the-farm assistance with management problems. Farm ownership loans are scheduled for repayment according to the borrower's ability to repay, over a period not exceeding 40 years. Interest rate is 5 percent.

In addition to farm-ownership loans, Farmers Home Administration makes operating loans, rural housing

loans, loans for the development of such rural community facilities as water and waste disposal systems, recreation areas, and emergency disaster loans to eligible farmers.

To obtain loans or detailed information about loans, apply to the nearest of the 1,600 county offices of the Farmers Home Administration. The address of this office can be obtained from the county agricultural agent or the Farmers Home Administration, Washington, D.C., 20250.

Federal land bank associations—which number more than 750—lend money for such purposes as: buying farmland; improving farmland and buildings; constructing farm buildings; refinancing debts; and providing a home for the owner or his family on or off the farm. Such loans may also include funds for buying livestock, equipment, and supplies and for paying farm-operating and family-living expenses. Loans are also made to part-time farmers.

Generally, the amount of a land bank loan may not exceed 65 percent of the appraised normal value of the farm. The appraisal is based principally on earning power rather than current sale price. Such loans may be made for periods up to 40 years although they are usually made for 20 to 34 years. Land bank loans can be paid ahead of schedule without penalty. Borrowers receive in the form of dividends any savings the associations make.

The Federal land bank associations are local cooperative lending organizations that operate under the supervision of 12 Federal land banks and the Farm Credit Administration.

Loans and information about loans may be obtained from the manager of the local Federal land bank association nearest you or from a local association representative. The address of the latter may be obtained from your county agricultural agent or from the Farm Credit Administration, Washington, D.C., 20578.

Production credit associations—which number nearly 500—are local cooperative lending organizations that operate under the supervision of 12 Federal intermediate credit banks and the Farm Credit Administration.

These associations make loans to farmers to finance livestock, machinery, farm improvements, and all types of operating and family living expenses. Interest is charged on each dollar only for the number of days it is outstanding. Operating loans are scheduled for repayment as income will be available during the season. Intermediate-term loans for capital improvements are made for periods up to 7 years.

Loans and information about loans may be obtained from the manager of the local association or from a local association representative. The address of the latter can be obtained from the county agricultural agent or the Farm Credit Administration, Washington, D.C., 20578.

Farm Insurance

A beginning farmer, even if pinched for capital, cannot neglect carrying adequate insurance. He simply cannot afford to take all the risks himself. Lenders may not permit him to do so.

The most important kinds of insurance for him to have are those that protect him from serious losses caused by fire and windstorm damage to his property (other than crops) and from liability for injury to the person or property of another. These losses are the ones most likely to be catastrophic. Few established farmers can afford to be without protection from them. They could wipe out a beginning farmer.

Some farmers need to take out insurance on crops also. Insurance against crop damage by hail or windstorm can be purchased in most areas. Federal "all risk" crop insurance is available on certain crops in designated counties. This Federal insurance insures against loss of production expenses—not profit from the crop.

Health insurance is usually needed by farm families. Sickness is more and more expensive and can cause real financial trouble. Hospital, surgical, and medical insurance are the main types. Insurance on the head of the family is especially desirable, for his sickness may mean loss of income as well as added expense. "Medicare" health insurance under the social security legislation of 1965 is limited to people 65 years old and over.

Many kinds of farm insurance are available on a minimum-loss basis; that is, no claim is paid unless the loss is over a specified amount. Other insurance policies carry a "deductible" clause; a certain sum is deducted from all claims.

Minimum-loss or deductible policies protect against the big losses that would endanger the operator's financial position. They cost considerably less than insurance against the full amount of loss.

Many established farmers take out minimum-loss or deductible policies, then rely on savings to insure against minor losses. Beginning farmers, who are not likely to have much in savings, need to consider insurance against even minor losses.

Some lenders require the borrower to carry life insurance payable to the lender if the borrower dies. Some operators, on their own, take out life insurance equal in amount to their indebtedness; in the event of their death, all loans could be paid off and the farm, machinery, and livestock left free of debt. Low-cost credit life insurance is available from most production credit associations and Federal land bank associations and from some commercial banks.

There are many kinds of life insurance—each designed to fill a particular need and purpose. Least expensive is term insurance. This provides protection for a fixed number of years, usually 5, 10, 15, or 20.

Most farm families are now covered by old age and survivors insurance under the social security system. Payments are made to farmers when they retire or become disabled, and to their dependents when they die.

The kinds and amounts of insurance that are adequate for a beginning farmer vary with circumstances. A more detailed discussion of the various kinds of insurance available appears in Insurance for Farmers, USDA Farmers' Bulletin No. 2137.

Getting Started

If you have little or no farming experience, and are seriously considering entering full-time commercial farming, you will, of course, need information more detailed than the general guides presented in this publication.

Some of this information can be furnished by the U.S. Department of Agriculture in answers to your particular questions. The more specific the questions, the more useful the replies can be.

If you are interested in farming in a particular State, it is suggested that you write the State Director of the Extension Service for helpful information. He can supply up-to-date references on the State's agriculture, addresses of agencies that can help beginners get started, and names and addresses of the State's county agricultural agents. Addresses of State Extension Service Directors are listed on page 22.

If you are interested in farming in a particular county, it is suggested that you write that county's agricultural agent. He or a committee of farmers working with him can furnish information about farms for sale or rent in the county, soils and topography—which often vary widely within short distances—crops suitable to the county, local farming practices, how much debt is safe,

how to rent a place, and the size of farm necessary to support a family.

Real estate dealers in farm properties have lists of farms for sale or rent. The U.S. Department of Agriculture does not maintain lists of either real estate agencies or private loan sources and is not in position to make recommendations as to their reliability.

It is strongly recommended that you visit a farm before you rent or buy it. You can then check not only on the farm from the soils, production, and financial standpoints but also on conditions on the farm and in the locality that may affect your family's health and happiness. Farming is a way of life as well as an occupation. Moves are time-consuming and expensive.

Points to check:

- Present and planned local public services.
- Current and prospective tax levels.
- Business, commercial, and banking facilities that serve farmers' needs.
- General character of the community.
- Location of schools, churches, and social centers.
- Availability of medical facilities.
- Opportunities for supplementary off-farm work.

Since lending agencies usually operate through local offices, this is also a good time to confer with local officials or representatives of commercial banks, insurance companies, mortgage companies, Federal land bank associations, production credit associations, Farmers Home Administration, individual lenders, farm machinery and equipment dealers, or other credit sources. Check on kinds and amounts of credit you could expect to get and on credit terms and conditions.

County Agricultural Stabilization and Conservation Service (ASCS) offices advise on and administer commodity programs, including allotments and marketing quotas for the basic commodities. These offices can also supply information about the soil, water, timber, and wildlife conservation practices that the Agricultural Conservation Program helps carry out on individual farms.

ASCS offices also are charged with the local administration of price-support commodity loans made available through the Commodity Credit Corporation, certain emergency programs in designated areas affected by drought or floods, the feed grain program, and other farm programs.

The Soil Conservation Service (SCS) has offices in nearly every county that provide technical assistance and information on soil and water conservation, land-use alternatives, soil surveys, and resource use.

Other Sources of Information

Listed below are the sources for certain other kinds of information of interest to some prospective farmers.

KIND OF INFORMATION:	SOURCE
Farming opportunities on land irrigated by the Federal Government.	Bureau of Reclamation, United States Department of the Interior, Washington, D.C., 20240.
Homesteads on public lands in the 48 conterminous States.	Bureau of Land Management, U.S. Department of the Interior, Washington, D.C., 20240.
Game and fur animals, commercial and sport fishing, and fisheries.	Fish and Wildlife Service, Department of the Interior, Washington, D.C., 20240.

Public lands in Alaska available for homesteading.	Manager, Land Office, Anchorage, Alaska, 99501 or Fairbanks, Alaska, 99701.
Climate, farming conditions, and markets in Alaska.	Director, Alaska Agricultural Experiment Station, Palmer, Alaska, 99645.

Selected Reference List

Other publications of the U.S. Department of Agriculture and of the Farm Credit Administration that may be helpful to prospective farmers are listed below.

For single free copies of all USDA publications listed except Soil Survey Reports, see your county agricultural agent or write to the Division of Information, OMS, U.S. Department of Agriculture, 20250. For free copies of FCA publications, write Farm Credit Administration, Washington, D.C., 20578.

U.S. Department of Agriculture

Part-Time Farming, Farmers' Bulletin 2178
Where and How To Get A Farm, Leaflet 432
Know Your Soil, Agriculture Information Bulletin 267
Planning The Farm For Profit and Stability, Farmers' Bulletin 1965
What Young Farm Families Should Know About Credit, Farmers' Bulletin 2135
Farmers Home Administration, Program Aid 705
Farm Ownership Loans, Program Aid 62
Insurance Facts For Farmers, Farmers' Bulletin 2137
Operating Loans For Better Farming, Better Living, Program Aid 182
Family-Farm Records, Farmers' Bulletin 2167
Planning Farm Machinery Replacements, Leaflet 427

Farm Lease Publications:

Your Farm Renting Problem, Farmers' Bulletin 2161
Your Farm Lease Contract, Farmers' Bulletin 2164
Your Farm Rent Determination Problem, Farmers' Bulletin 2162
Your Crop-Share-Cash Farm Lease, Miscellaneous Publication 838
Your Cash Farm Lease, Miscellaneous Publication 836
Your Livestock-Share Farm Lease, Miscellaneous Publication 837
Your Farm Lease Checklist, Farmers' Bulletin 2163

Rural Recreation Enterprise For Profit, Agriculture Information Bulletin 277
Liability and Insurance Protection For Farmers Who Have Income-Producing Recreational Facilities, ERS–120

Soil Survey Reports:

For most parts of the country, the Soil Conservation Service has published soil survey reports. Each report includes a soil map of a county or an area, and soil descriptions, land-capability groupings, productivity estimates, management suggestions, and other helpful information about the area. To obtain a list of soil survey reports available in your State, write the Soil Conservation Service, U.S. Department of Agriculture, Washington, D.C., 20250.

Farm Credit Administration

Getting and Using Farm Credit, Circular E–41
Federal Land Bank System—How It Operates, Circular 35
The Cooperative Farm Credit System, Circular 36

Addresses of State Extension Service Directors

ALABAMA: Auburn University, Auburn 36830
ALASKA: University of Alaska, College 99735
ARIZONA: University of Arizona, Tucson 85721
ARKANSAS: P. O. Box 391, Little Rock 72203
CALIFORNIA: 2200 University Avenue, Berkeley 94720
COLORADO: Colorado State University, Fort Collins 80521
CONNECTICUT: University of Connecticut, Storrs 06268
DELAWARE: University of Delaware, Newark 19711
FLORIDA: University of Florida, Gainesville 32603
GEORGIA: University of Georgia, Athens 30601
HAWAII: University of Hawaii, Honolulu 96822
IDAHO: University of Idaho, Moscow 83843
ILLINOIS: University of Illinois, Urbana 61803
INDIANA: Purdue University, Lafayette 47907
IOWA: Iowa State University, Ames 50010
KANSAS: Kansas State University, Manhattan 66504
KENTUCKY: University of Kentucky, Lexington 40506
LOUISIANA: Louisiana State University, Baton Rouge 70803
MAINE: University of Maine, Orono 04473
MARYLAND: University of Maryland, College Park 20742
MASSACHUSETTS: University of Massachusetts, Amherst 01003
MICHIGAN: Michigan State University, East Lansing 48823
MINNESOTA: University of Minnesota, St. Paul 55101
MISSISSIPPI: Mississippi State University, State College 39762
MISSOURI: University of Missouri, Columbia 65202
MONTANA: Montana State University, Bozeman 59715
NEBRASKA: University of Nebraska, Lincoln 68503
NEVADA: University of Nevada, Reno 89507
NEW HAMPSHIRE: University of New Hampshire, Durham 03824
NEW JERSEY: Rutgers—The State University, New Brunswick 08903
NEW MEXICO: New Mexico State University, University Park 88070
NEW YORK: New York State College of Agriculture, Ithaca 14850
NORTH CAROLINA: North Carolina State University, Raleigh 27607
NORTH DAKOTA: North Dakota State University, Fargo 58103
OHIO: Ohio State University, 2120 Fyffe Road, Columbus 43210
OKLAHOMA: Oklahoma State University, Stillwater 74075
OREGON: Oregon State University, Corvallis 97331
PENNSYLVANIA: The Pennsylvania State University, University Park 16802
PUERTO RICO: University of Puerto Rico, Rio Piedras 00927
RHODE ISLAND: University of Rhode Island, Kingston 02881
SOUTH CAROLINA: Clemson University, Clemson 29631
SOUTH DAKOTA: South Dakota State University, Brookings 57007
TENNESSEE: University of Tennessee, P.O. Box 1071, Knoxville 37901
TEXAS: Texas A&M University, College Station 77841
UTAH: Utah State University, Logan 84321
VERMONT: University of Vermont, Burlington 05401
VIRGINIA: Virginia Polytechnic Institute, Blacksburg 24061
WASHINGTON: Washington State University, Pullman 99163
WEST VIRGINIA: Mineral Industries Building, West Virginia University, Morgantown 26506
WISCONSIN: University of Wisconsin, Madison 53706
WYOMING: University of Wyoming, Box 3354, University Station, Laramie 82071

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